

REMARKS

I. Introduction

Claims 1-23 are pending in this application, of which claims 1-4 are independent. Of those claims, claims 1, 2, 15, and 17-20 have been withdrawn from consideration pursuant to the provisions of 37 C.F.R. §1.142(b).

Applicants acknowledge, with appreciation, the Examiner's indication that claims 8-10, 12-14 and 23 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and claim 11 would be allowable if written to overcome the rejection under 35 U.S.C. §101.

In this Amendment, claims 3-5, 7-14, and 21 have been amended, and claims 1, 2, 15, 17, and 19 have been canceled, without prejudice, reserving right to prosecution in a continuation application. Care has been exercised to avoid introduction of new matter. Support for the present Amendment should be apparent throughout the written description of the specification.

Claims 3-14, 16, and 21-23 are now active in this application, of which claims 1 and 4 are independent. Applicants respectfully request the Examiner to rejoin non-elected claims 18 and 20 depending on independent claim 3.

II. The Rejection of the Claims under 35 U.S.C. §101

Claims 3, 4, 7, and 11 have been rejected under 35 U.S.C. §101. The Examiner asserted that the claimed invention appears to be an abstract idea than a practical application of the idea, and does not provide utility.

Claims 3, 4, 7, and 11 have been amended to address this rejection. Applicants believe that the claimed subject matter can produce a useful, concrete, and tangible result, and provide utility. Withdrawal of the rejection of the claims is, therefore, respectfully solicited.

III. The Objection to the Claims

Objection has been made to claim 5, requiring the limitation to be clarified. Claim 5 has been amended. Applicants believe that the amendment to claim 5 is fully responsive to the Examiner's concern. Withdrawal of the objection to claim 5 is, therefore, respectfully solicited.

IV. The Rejection of the Claims under 35 U.S.C. §102

Claims 3-5, 7, 16, and 21 have been rejected under 35 U.S.C. §102(b) as being anticipated by Kapur et al. The Examiner asserted that Kapur et al. discloses a method for performing transition fault simulation identically corresponding to what is claimed.

Applicants submit that Kapur et al. does not identically disclose a method of evaluating the quality of test sequences for delay faults including all the limitations recited in independent claim 3. Specifically, the reference does not disclose, at a minimum, "the result of the total of the delay values of the 'delay faults detected by the test sequences for delay faults' divided by the predetermined delay values of the defined delay faults is set as a fault coverage," as claimed.

Kapur et al. describes generation of a test pattern that maximizes a detecting ability for delay defaults with a small delay value (see column 10, lines 66 to column 12, line 10). The system repeats a test pattern generation process until it detects a detectable delay fault with a maximum delay value or it detects a delay fault with a delay value greater than a certain threshold value. Kapur et al. describes, "the circuit path is within a certain acceptable tolerance

of the longest circuit path (column 11, lines 56-58). ATPG systems, in general, have a fault detecting measurement method. Even if it is assumed that the system of Kapur et al. is configured to provide fault detecting results for all faults after completion of the detecting process, Kapur et al. is silent on how to calculate a fault coverage.

In contrast, claim 3 recites calculating a fault coverage in the following manner: a fault coverage equals the total of delay values of delay faults detected by test sequences for delay faults divided by a predetermined delay value of defined delay faults. Thus, the claimed subject matter is capable of detecting delay faults with a small delay value and its detection result can be accurately reflected as a fault coverage in a quantitative measurement. Kapur et al. is silent on the claimed limitation and the benefit obtained from the limitation.

Based on the foregoing, Applicants submit that Kapur et al. does not identically disclose a method of evaluating the quality of test sequences for delay faults including all the limitations recited in independent claim 3. The above discussion is applicable to independent claim 4 reciting “determining a fault coverage by dividing the total of the delay values....” Dependent claims 5, 7, 16, and 21 are also patentably distinguishable over Kapur et al. at least because these claims include all the limitations recited in independent claim 3. Applicants, therefore, respectfully solicit withdrawal of the rejection of the claims under 35 U.S.C. §102(b) and favorable consideration thereof.

V. The Rejection of the Claims under 35 U.S.C. §103(a)

Claim 6 and 22 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kapur et al. in view of Rearick et al. Claims 6 and 22 depend from independent claims 3 and 4. Applicants, thus, incorporate herein the arguments previously advanced in traversing the

imposed rejection of claims 3 and 4 under 35 U.S.C. §103 for obviousness predicated upon Kapur et al. The Examiner's additional comments and secondary reference to Rearick et al. do not cure the previously argued deficiencies in Kapur et al. Applicants, therefore, respectfully solicit withdrawal of the rejection of the claims and favorable consideration thereof.

VI. Conclusion

It should, therefore, be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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